DOCUMENT RESUME

ED 265 279 UD 024 685

AUTHOR Butz, William P.; And Others
TITLE Demographic Challenges in America's Future.
INSTITUTION Rand Corp., Santa Monica, Calif.
REPORT NO ISBN-0-8330-0420-4; Rand-R-2911-RC
PUB DATE May 82
NOTE 48p.
AVAILABLE FROM Rand Corporation, Publications Dept., 1700 Main Street., Santa Monica, CA 90406 ($4.00).
PUB TYPE Statistical Data (110) -- Reports - General (140)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Birth Rate; *Demography; *Educational Policy; Family Size; *Futures (of Society); Immigrants; Migration Patterns; National Defense; Population Growth; *Population Trends; *Public Policy; Residential Patterns; Social Change; *Social Services
IDENTIFIERS *Zero Population Growth

ABSTRACT

This document examines trends in the United States population since World War II, and projects a scenario of how demographic and economic phenomena may evolve over the next several decades. The report is divided into five sections. Section 1 introduces the volume and discusses generally some of the effects of the nation's transition to zero population growth. The decline of birthrates will cause labor markets to tighten (wages will rise and unemployment will fall), but this will also encourage immigration to continue to increase. Section 2 attempts to explain why American fertility rates have changed, and argues that fertility rates will remain low, and perhaps decline. An economic model of fertility behavior is presented to explain fertility differences among couples, and the impact of the declining fertility rate on America's age structure is assessed. Section 3 discusses internal population redistribution, focusing on the increase of migrations out of major cities and to the south and west. The possible effects of these shifts on local governments is briefly considered. Section 4 analyzes the impact of rising immigration rates. Two factors are identified to explain the growth: the extreme imbalances in an increasingly international economy, and the political instability generated by the collapse of former spheres of influence. The general effects of immigration and appropriate government responses are described. Finally, Section 4 examines four areas in which massive policy changes are already underway in response to the population shifts: health care, military preparedness, Social Security, and education. (KH)

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Demographic Challenges in America's Future

William P. Butz, Kevin F. McCarthy,
Peter A. Morrison, Mary E. Vaiana

UD024685

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This publication was supported by The Rand Corporation as part of its program of public service.

Library of Congress Cataloging in Publication Data

Butz, William P.
Demographic challenges in America's future.

"R-2911-RC."
"June 1982."
1. United States--Population. 2. United States--Social conditions--1960- . I. Morrison, Peter A. II. Vaiana, Mary E., 1942- . III. Rand Corporation. IV. Title.
HB3505.B87 1982 304.6'0973 82-11241
ISBN 0-8330-0420-4

The Rand Publication Series: The Report is the principal publication documenting and transmitting Rand's major research findings and final research results. The Rand Note reports other outputs of sponsored research for general distribution. Publications of The Rand Corporation do not necessarily reflect the opinions or policies of the sponsors of Rand research.

Published by The Rand Corporation

R-2911-RC

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May 1982

Rand
SANTA MONICA, CA. 90406

PREFACE

From an examination of post-World War II events, this report distills a specific scenario of how demographic and economic phenomena may evolve over the next several decades. The authors focus on birthrates, population redistribution, documented and undocumented immigration, wages and unemployment, women's labor market participation, and retirement ages. The changes likely to occur in these areas will present private and public decisionmakers in the United States with important challenges. The authors discuss these challenges for education, health care, Social Security, and military preparedness.

The authors and their colleagues at Rand have published technical reports on these topics for a decade. Here, however, they are writing to a broader audience of informed citizens and policymakers. Those readers interested in the future course of demographic and economic events, or in the implications of these events for private decisionmaking and public policy, should find this report informative and provocative.

This work was supported by The Rand Corporation from its own research funds.

SUMMARY

The population of the United States is changing, gradually but profoundly. The fertility rate is hovering near record low levels and is likely to remain there; internal migration patterns have altered radically; and both legal and illegal immigration have greatly increased. Taken together, these demographic shifts confront policymakers and planners with an environment that is altering in complex ways. Understanding that environment, and the direction of demographic trends, is prerequisite to shaping the future rather than simply reacting to it. This report describes this evolving demographic context, speculates on its future course, and examines several key problems that policymakers can expect to face.

We base our view of the nation's demographic future on an explicit model of how demographic, economic, and political forces may interact. Our point of departure is the fact that fertility rates have generally declined since the early 1960s and have remained low. Because of that decline, the native-born population of young adults is now beginning to shrink in size and will remain comparatively small at least through the rest of this century. We anticipate that this smaller cohort of young adults will cause labor markets to tighten—wages will rise quickly and unemployment will fall. High wages should help to persuade young women and older workers of both sexes who face retirement to hold on to their jobs. The result will be continued low fertility rates and an increase in the average retirement age.

The tightening labor markets ahead may also heighten the nation's attractions to foreigners who contemplate immigration. We anticipate that immigration, whether legal or illegal, will increase accordingly, stimulated by world political instability and growing population pressures.

The effects of these changes will be sweeping, but distributed unevenly across the nation as the population shifts out of larger cities and to the south and west in general. U.S. policy choices will have to accommodate to all of these developments. As examples of the resource shifts and tradeoffs that may be required, we examine four areas in which massive changes are already under way: education, health care, military preparedness, and Social Security.

ACKNOWLEDGMENTS

The authors are grateful to the many Rand colleagues who read and critiqued this report at various stages in its development. Special thanks are due to Anthony H. Pascal, whose constructive criticisms substantially improved both the structure and the style of the text.

The discussion of imbalances in the world economy and the collapse of former spheres of influence benefited from conversations with William Alonso and from draft material written by him. We also thank Judith Blake of UCLA for helpful comments on an early version of the manuscript. Malcolm Palmatier edited the manuscript and Janet DeLand guided it through the production process.

The authors are indebted to Gustave H. Shubert for suggesting the idea of this monograph, to David W. Lyon for his encouragement and patience in seeing the project to completion, and to The Rand Corporation for providing support.

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I. INTRODUCTION

The United States faces a transition to zero population growth. Following a population boom immediately after World War II, the nation's birthrate began to decline in the early 1960s. If low fertility persists, natural population growth (the number of births less deaths among native-born couples) may virtually halt early in the next century. Unprecedented demographic changes are in store—in the population's age structure, in the composition of families and households, in the economic and familial activities of women and men, and in the number and characteristics of foreign immigrants. These effects will widen and deepen through the remainder of the twentieth century.

Effects of the transition to zero population growth have already begun to appear:

- Immigration—legal and illegal—now accounts for nearly one-half of total U.S. population growth.
- Persons 65 years and older now constitute 11 percent of the U.S. population; they will make up about 20 percent of it five decades hence.
- The majority of wives—and a near majority of mothers—hold paying jobs, and the typical family is now one in which both spouses are breadwinners.
- Households are becoming more varied: couples without children, children without parents, parents without marriage, and many more persons living alone.

The transition to population stability is advancing unevenly, however, because internal migration is altering the national pattern of population growth and decline. Since 1970, migrants have streamed out of many large metropolitan areas seeking more amenable living conditions. Thus, some regions have already stopped growing and are experiencing shrinking pains; many more localities will face these stresses in the coming decades. In contrast, the nonmetropolitan areas in virtually all regions are gaining population through migration.

Public awareness of these demographic changes intensified during the 1970s. It also shifted from a simplistic concern with sheer numbers of people to more complex issues. Policymakers seek to understand the dimensions of change in order to guide social adjustment and to define possibilities for personal, political, and corporate choices. Those choices are not easy. For example, when school enroll-

ments soared in the post-World War II years, few could object to building new schools. Now declining enrollments pose troublesome questions: Should teaching staff be reduced or pupil-teacher ratios be increased? Should some schools be closed for reasons of economy or be kept open as a service to the surrounding community?

This complex picture has yet another dimension. The United States is experiencing a period of active immigration. Where these immigrants choose to settle will blunt or sharpen the effects of demographic changes on particular communities.

In this report, we describe this evolving demographic context, speculate on its future course, and try to foresee some of the issues and problems that may ensue. Most of our speculations emerge from a particular conception of how demographic, economic, and political forces may interact over the next several decades. Our point of departure is the fact that birthrates have generally declined since the early 1960s and are now hovering near record-low levels. Because of that decline, the number of native-born young adults is now beginning to fall, and will remain low at least through the rest of this century.

We anticipate that this smaller cohort of young adults will cause labor markets to tighten—wages will grow quickly and unemployment will fall. These higher wages should help to persuade young women and older workers who face retirement to hold on to their jobs. These job opportunities are especially important because they will discourage women in the labor force from having many children, and may persuade some to have none at all. Among older workers, the effect will be to raise the average retirement age.

The tightening labor markets ahead may also make this country more attractive to foreigners contemplating a move. We anticipate that immigration, whether legal or illegal, will accordingly increase, stimulated by world political instability and growing population pressures.

These expectations for birthrates, wages, unemployment, women's labor force participation, retirement age, and immigration are based on evidence about the way these factors have interacted in the past. Within this context, we feel that our scenario is a good guess about the future. Of course, some very different visions of the future have been suggested. As we develop our arguments, we will consider some of the major alternatives to our views.

We begin by examining the emerging population trends and describing the relationships among them.

II. PATTERNS IN U.S. FERTILITY RATES

Central to recent U.S. demographic experience is the long swing in American fertility that spans the past six decades. This swing, shown in Fig. 1, is the most fundamental source of contemporary demographic change.

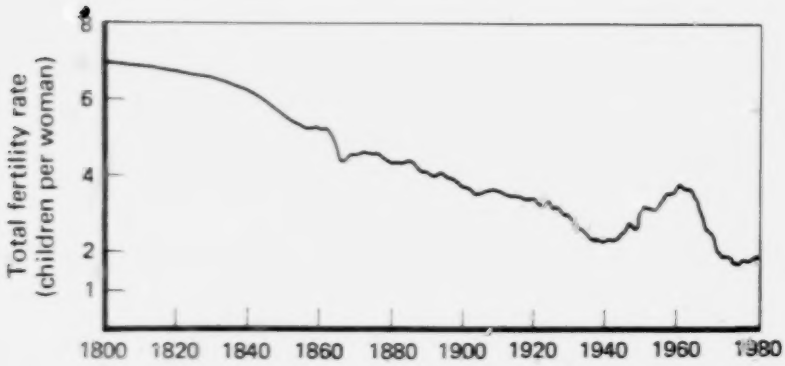


Fig. 1—Fluctuations in the U.S. fertility rate

Fertility rates had been generally falling since the beginning of the nineteenth century, but in 1921 the process accelerated. American couples reduced their fertility by more than a third during the subsequent 12 years. Fertility remained low during the Great Depression, but rebounded vigorously in the postwar years—the so-called baby boom—as the economy expanded. During the late 1950s, American couples reached a peak of 3.8 children per woman, an all-time high for the century. After this peak, fertility rates again fell dramatically to fewer than 1.8 births per woman in 1976, the lowest level in American history. Since then, fertility rates have risen only very slightly. This precipitous decline following the postwar boom is often referred to as the baby bust.

The crucial question for policymakers and planners is whether fer-

tility rates will remain low, sink even lower, or climb. All three possibilities merit serious consideration. Our prediction is that fertility rates will remain low and perhaps decline even further.

WHY DO FERTILITY RATES CHANGE?

Explanations of why fertility rates vary include such factors as delayed births, more widespread use of contraception, and the state of the economy. Rigorous tests of these explanations are difficult. However, we can judge their usefulness in a general way by examining the fluctuations of the fertility rate since World War II (Fig. 2).

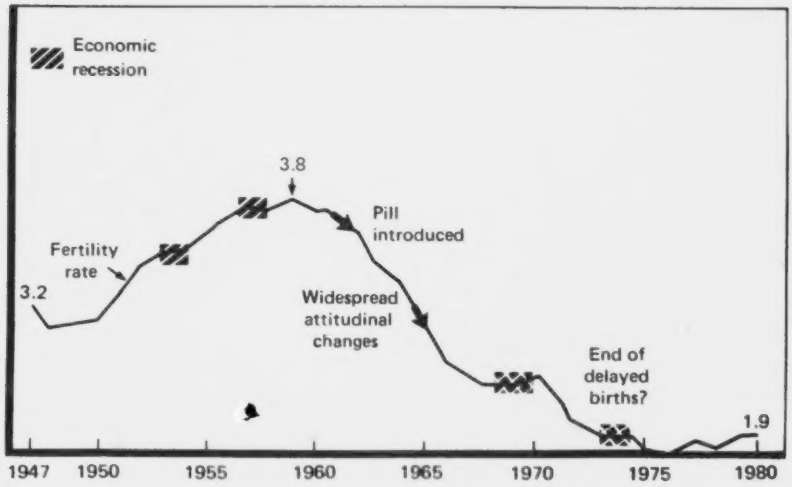


Fig. 2—Some explanations of fertility rate changes

One explanation focuses on the discovery and marketing of more effective contraceptives. The first of these, the birth control pill, was authorized for public use in June 1960. By 1964, the peak of the baby boom was seven years in the past and fertility rates were falling at a speed without precedent in U.S. peacetime history. Yet by 1964 only 10 percent of married women of childbearing age were using the new pill. Thus the birth control pill can account for only a small part of the

fertility declines of the early 1960s. The pill and subsequent contraceptive innovations have certainly speeded the ongoing fertility decline in the past 20 years, but they did not start it.

An alternative hypothesis is that widespread changes in women's attitudes and preferences caused the baby bust. Of course, attitudinal changes cannot be pinpointed in time, but social science research suggests that these attitudinal shifts were hardly noticeable until the mid-1960s and were not widespread until several years later. For example, newspaper and magazine references to changing attitudes were infrequent in the early 1960s but were common by 1967. Indeed, one suspects that these attitudinal shifts were more a result of women's increasing involvement in the job market than a cause.

Still another hypothesis emphasizes the actual living standard of young couples as measured against the standard they anticipated. Young adults who are members of large cohorts experience more competition in the job market, hence have a lower standard of living, than workers who belong to small cohorts. Therefore, they may be less likely to marry and have children. Because the size of a cohort depends on fertility rates two decades back, this hypothesis predicts a succession of baby booms and busts, each lasting about twenty years. Accordingly, fertility rates should rise in the 1980s and 1990s, owing to the smaller cohorts born in the 1960s and 1970s. Because these smaller cohorts will enjoy better wages and job opportunities as young adults, this hypothesis suggests that they will have more children. The hypothesis is consistent with some evidence at the country level, but it is not supported by most studies that have attempted to link it to the fertility decisions of individual couples.

Finally, there is the hypothesis that the baby bust is a temporary phenomenon that will end when couples make up for the births they postponed during the 1960s. This delayed childbearing, it is argued, should not be misconstrued as record-low fertility; births put off in one year can generally be made up in another. The delayed-births hypothesis was prominent during the fertility levelings of 1970 and 1974. But in both cases the fertility rate then resumed its decline in the following year. Since 1975, the fertility rate of women aged 30-34 has risen slightly, suggesting that many women in this age group may indeed be having children that they had earlier postponed. Even so, the baby bust has been of such a magnitude and duration that no timing corrections could ever cancel it out.

Our research attempts to improve on the record of these hypotheses in explaining and predicting fertility changes over time. We draw on an economic model of fertility behavior to explain fertility differences among couples. The model directs attention to two key variables. One is family income. Other things being equal, couples with higher in-

come will have more children, just as they will have more services and material goods. The second key variable is the opportunity cost of women's time—the costs of forgoing other activities because the time is committed instead to childrearing. In a society where mothers usually take the major responsibility for this task, this opportunity cost is a significant part of the cost of children. The economic model predicts that women who can earn higher wages in the labor market will have fewer children, other things being equal, because they have to sacrifice more income if they opt for childrearing. The greater the cost of children in terms of the employment value of the mother's time, the fewer the number of children demanded.

The implications of this model are straightforward. When few women are employed, family income varies with the business cycle. Thus when the economy improves, fertility rates also rise. During recessions, however, fertility rates fall as couples become edgy about possible unemployment and put off the costly activity of childbirth while incomes are in jeopardy.

The pattern is reversed in an economy in which many women work in the labor market. In this situation, business cycles generate swings not only in men's income but also in women's, and thus also in the opportunity cost of spending time at home with children. Good times then increase both income and the cost of childrearing. As more and more women enter the job market in response to attractive wages, the former positive relationship between business cycles and fertility should disappear. If a sufficiently large number of women are employed, and if the opportunity cost of children is a sufficiently important factor in couples' decisions, fertility rates may even move countercyclically.

Let us consider how well these explanations account for the actual fertility trends as they relate to the economic variables in question. Figure 3 shows the pattern for family income between 1947 and 1980 in constant 1962 dollars. Family income rose steadily until 1976, except during the four postwar recessions (1954, 1957, 1970, 1974). In 1980, this variable stood at about its 1976 level. A second variable of interest is women's average hourly wage; after a slight upward trend in the 1950s, it rose steeply until the mid-1970s, after which, like family income, it leveled off. The proportion of women employed also rose dramatically beginning in the late 1950s.

Our model suggests the following interpretation of these data. Prior to 1960, so few women were employed that fertility rates tended to follow business cycles. The economic recessions of 1954 and 1957 were accompanied by downturns in the fertility rate. However, the prolonged economic expansion of the 1960s, with rising wages and job opportunities, attracted increasing numbers of women to work outside

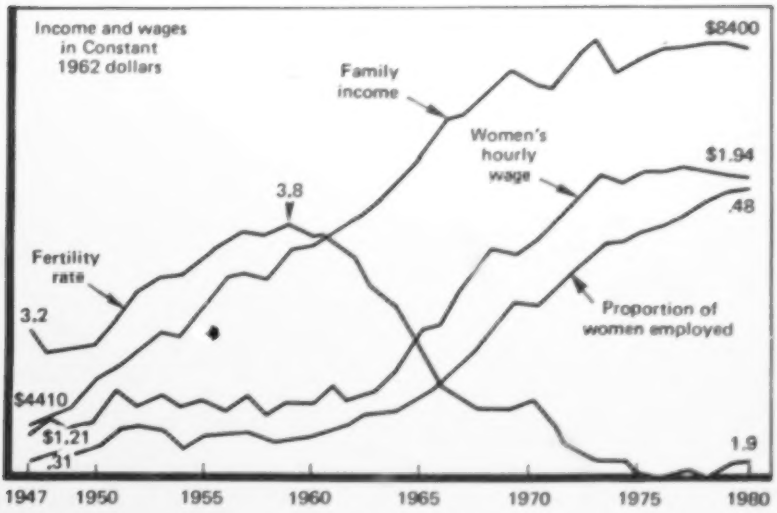
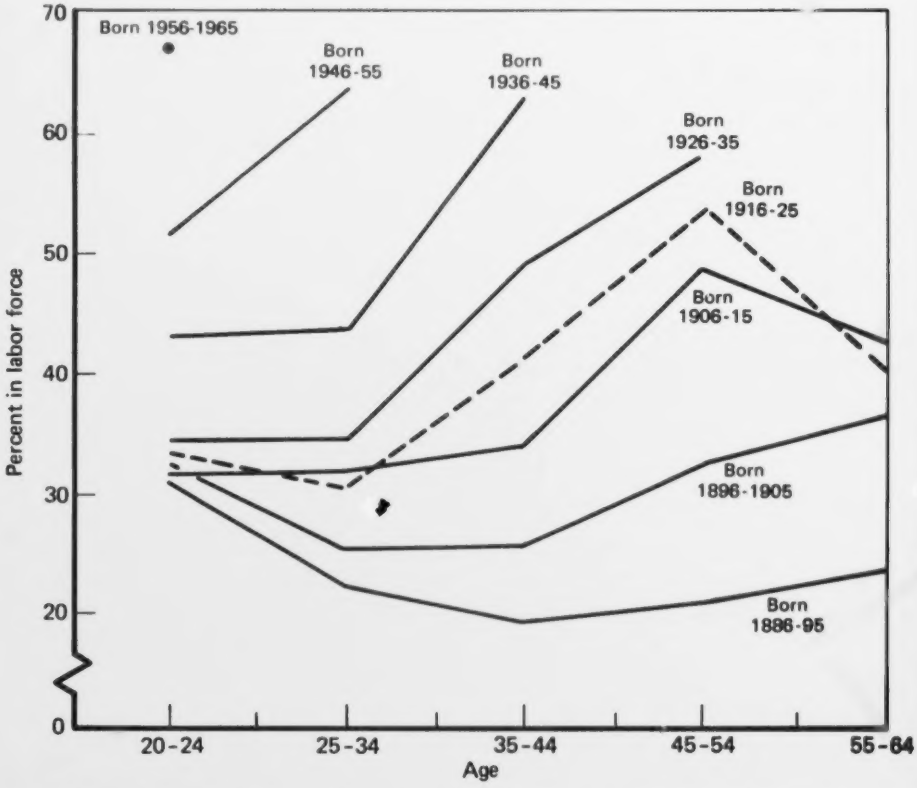


Fig. 3—How the key variables have changed since World War II

the home. The increased opportunity cost of their time caused many of them to forgo or delay having children. So many women became employed that the economic recession of 1970, which reduced the value of time spent in the labor market, induced a fertility increase. After the 1970 recession, real wages resumed their steep rise and women went to work in record numbers instead of having children.

During the 1974 recession, women's wages again fell and their fertility stopped declining. In the succeeding years, however, women's wages have failed to rise in real terms. In 1981 wages stood at virtually the same level as in 1975. As our model would predict, fertility rates during this period have not resumed their previous declines. Both women's wages and fertility have remained quite level. The fact that the proportion of women employed continued to rise in the late 1970s may indicate that more women are now choosing to work even while they have a young child.

An additional dimension to the consistently increasing proportion of women employed is the character of their labor market involvement. This dimension can be illustrated by considering shifts in the ages at which women enter the labor market (Fig. 4). Labor force



SOURCES: 1890–1950: Gertrude Bancroft, *The American Labor Force: Its Growth and Changing Composition* (New York: Wiley, 1958) p.33; 1960, 1970: *Employment and Training Report of the President* (Washington, D.C.: U.S. Government Printing Office, 1980) p. 225; 1980: U.S. Department of Labor, *Employment and Earnings,* Vol. 27, No. 9 (Washington, D.C.: U.S. Government Printing Office, 1980) Table A-4, p. 23.

Fig. 4—Labor force participation over a working life of U.S. women born in selected time intervals: 1886-1965

participation rises with each successive cohort. Especially noteworthy is the sharp rise in early labor force participation among cohorts born after 1935. These changes reflect shifts in the way young women order their careers as mothers and wage-earners. Women born before 1936 entered the labor market relatively early but left it during the childbearing years. Because this absence generally occurred during the years when career advancement would be most rapid, women lost opportunities to establish their careers and to gain seniority and experience. Today's young wives started earning income earlier, and many have remained in the labor force even after children have arrived. Their attachment to work outside the home is more permanent, and their opportunities for career advancement are greater.

Some other demographic facts support the prediction that large numbers of women will continue to work outside the home. Members of relatively small cohorts fare better in the labor market than do members of larger cohorts. They encounter less competition when they first seek employment, and when their more senior and more numerous counterparts retire, more positions are vacated than there are junior people to fill them. In the 1960s, working women were part of a large cohort resulting from the baby boom. Nevertheless, in an expanding economy, women responded to rising wages by going to work in unprecedented numbers. In the 1970s, the cohort to which young working women belonged was even larger. Yet despite a higher unemployment rate and less dramatic growth in wages, the demand for labor increased sufficiently to persuade ever-increasing proportions of women into the market. However, the women and men born after 1957 are members of progressively smaller cohorts and will experience consequent privileges in the labor market. If the proportion of women employed and their real wages grew dramatically in the past two decades despite the ever-increasing numbers of women, we expect their employment and earnings to rise even more rapidly in the next two decades, when the number of women competing for jobs will be shrinking.

The increased wages and career satisfaction to be gained in the marketplace have made parenthood a more costly choice for women—and less of a foregone conclusion. Although both fertility rates and women's wages have remained relatively level since 1975, the next period of economic growth and increases in real wages should cause fertility rates to resume their earlier decline. The rates may decline sharply or only a little. Presumably, many couples will choose to have at least one child in spite of the high opportunity cost of the wife's time. But, in any case, we foresee no sustained fertility increases, no new baby boom that would in any way approximate the magnitude of the fertility declines between 1960 and 1975. This steady or declining

fertility trend will be punctuated by countercyclical movements as couples compress childbearing into periods of economic slowdown when, from the standpoint of the mothers' earnings forgone in child-care, births are relatively less expensive.

AMERICA'S CHANGING AGE STRUCTURE

We have used an economic model to argue that the crucial compo-ment of demographic experience, the fertility rate, will remain low and perhaps will decline further. What will be the consequences of that decline?

Figure 5 is a graphic illustration of one key effect—a transforma-tion of America's age profile. It shows schematically the portion of the U.S. population in each ten-year age group at selected dates since the beginning of the century.

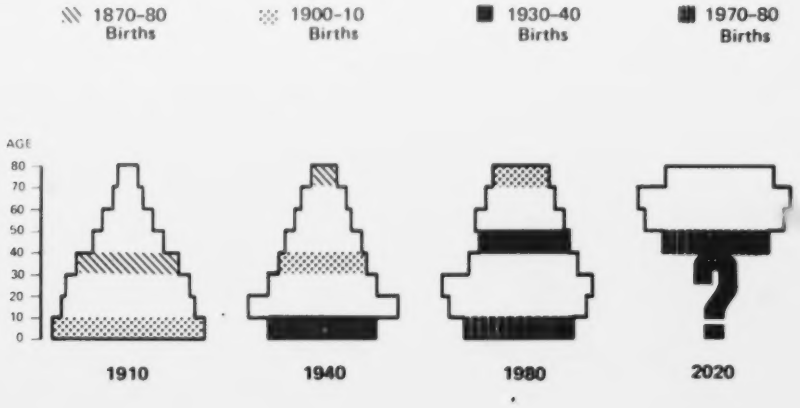


Fig. 5—The population's changing age structure

In 1910, the population was very young. The largest group was chil-dren born in the previous ten years; the smallest group was the elder-ly. Thirty years later, the age structure of the population had shifted. The babies of the century's first decade were in their thirties. The shape of the structure indicates that older people were by then a larger share of the population. The youngest cohort, born during the

Great Depression, was relatively small. The more rectangular structure for 1980 reflects the sweeping fertility changes of the previous 40 years. The bumper crop of babies born after World War II is now in its late twenties and thirties. The smaller number of teenagers and children is a product of the baby bust.

Both demands for public services and the revenues to support them grow or shrink in proportion to the population in specific age ranges. The baby boom bulge, the most salient feature of the national population profile, provides a dramatic example. The babies born just after World War II strained the capacity first of maternity wards, then of schools, universities, juvenile courts and prisons. In the 1970s, the job and housing markets felt the pressure. By the early part of the next century, they will also strain the capacity of the Social Security system, a system financed by the relatively smaller generations born since the 1960s.

The contemporary national rate of population growth (11 percent between 1970 and 1980) conceals large variations among the individual age groups. For example, during the 1970s:

- The student population (aged 5-14) declined by 14 percent.
- The college- and military-age population (aged 18-21) increased by 17 percent.
- Prospective homebuyers (aged 25-34) grew by 49 percent.
- The heaviest consumers of health care (aged 65 and older) increased by 28 percent.

These wide variations in rates of change reflect the gradual but fundamental shift in the composition of the dependent population. In the past, there were disproportionate numbers of young dependents; in the future, there will be disproportionate numbers of elderly dependents. This demographic transformation will compel a massive shift of societal resources away from the needs of the young and toward the needs of the elderly. As demographic change modifies whose wealth and income are redistributed to whom, it will alter the consequences of existing legislation. For example, the prospects of continuing low fertility are compelling Congress to restructure the financing of the Social Security system to meet the demands of the next century.

Another consequence of the post-1960 baby bust has already been mentioned: The declining numbers, first of young adults, then of the entire adult population, will cause tighter labor markets. At the end of the 1980s, and especially in succeeding decades, employers will be forced to raise wages in order to compete for the dwindling numbers of workers. We anticipate that young women will respond by working longer hours and in greater numbers than they do now. We also expect that many older workers contemplating retirement will seek to

keep their jobs, perhaps part time, for additional years. The average retirement age will then increase, reversing its 35-year decline.

We have been considering the nation's demographic future as if the demographic system were essentially static and closed: static in that people basically stay put, closed in that the only sources of growth are internal. Neither characterization, of course, is accurate. Two other important demographic phenomena interact with the fact of reduced fertility rates: internal geographic movements and immigration.

III. INTERNAL POPULATION REDISTRIBUTION

Americans are mobile people. Migration over the decades has shifted the nation's statistical center of gravity steadily westward and southward. Sometime in the late 1970s, that hypothetical midpoint crossed the Mississippi River, and it continues to move steadily southwest.

This restlessness changes more than just the national center of gravity. In an era of slow national population growth, the ebb and flow of migration becomes a "zero-sum" game: one region gains at another's expense. Population gained or lost through migration means, in turn, the immediate transfer of markets: dollars are spent in Dallas, not Detroit. It also causes political reverberations. Legislatures have to grapple with the questions of whose seats to abolish and where to put new districts. To a considerable extent, internal migration is what determines where the symptoms of slow population growth first appear.

Why do people move? Most explanations emphasize economic and job-related factors. People move from areas where jobs are scarce to areas where workers are needed. But evidence is mounting that today's migrants are also strongly attracted by amenities and other considerations that contribute to the "quality of life." For some, it is a milder climate; for others, access to recreational and leisure pursuits. Many people are simply moving to where the cost of living is lower. Economic opportunity is still important, but other forces now accompany it.

To understand population movements and where they are leading, we must focus on two important shifts in the pattern of U.S. migration that have emerged clearly during the 1970s. First, people are favoring smaller communities over larger ones. Second, regional patterns of migration have changed, with the South and the West gaining at the expense of the North and the East. This section considers the nature of these shifts and assesses their likely future course.

DECONCENTRATION

The blending of social with economic motives increasingly influences and thus helps explain these migration shifts.

In the 1950s, the major population movements began in the central

cities and ended in the suburbs; but at the same time the central cities were being repopulated by young rural people seeking better jobs. Toward the end of the 1960s, the population of the large central cities began to decline sharply. By the end of the next decade, it was apparent that people were not simply leaving the central city; increasingly the exodus was away from the entire metropolitan area, slowing—in some cases even halting—its growth. Migrating Americans began heading for smaller communities.

Figure 6 shows several characteristic settlement patterns. The first is the out-migration from large cities. Population growth in very large metropolitan areas is slowing or has stopped. According to the 1980 census, eight of the nation's twenty largest Standard Metropolitan Statistical Areas registered actual population losses during the 1970s.

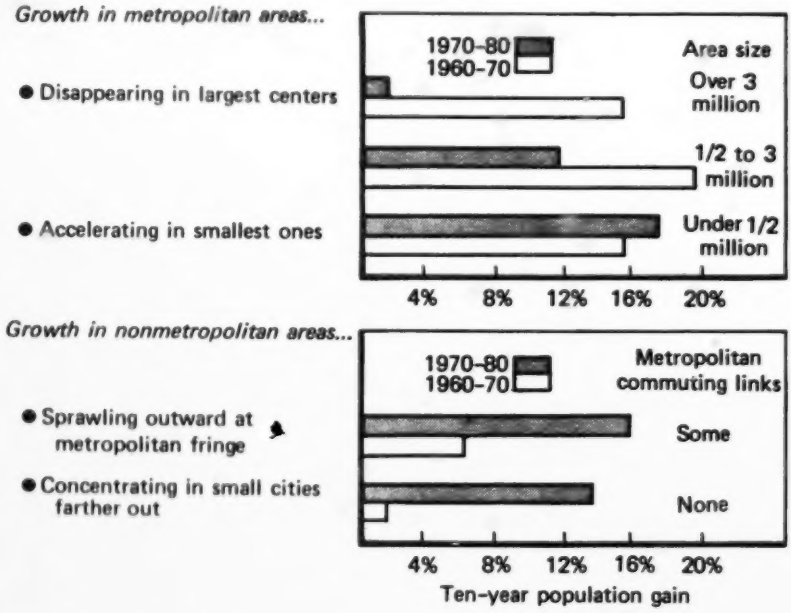


Fig. 6—The shift toward smaller communities

As always, out-migration has been selective. The more affluent move out, leaving behind cities with shrinking tax bases and disproportionate numbers of residents who are disadvantaged or require

special social services. As a result, problems of dependency and poverty, which are not exclusively problems of these shrinking cities, accumulate within them.

During the 1970s, the number and proportion of poor people in the United States declined, but in the nation's core cities both measures increased. During this period, the population of central cities shrank at an annual rate of 1 percent, but the population defined as living in poverty in these cities increased at an equivalent annual rate. Thus the percentage of city-dwellers below the poverty level rose from 13 percent in 1970 to more than 16 percent at the end of the decade—almost 9.5 million persons. More than half of them are black.

In contrast to the slowing growth in large metropolitan areas, the growth of smaller metropolitan areas has accelerated, particularly those with population under half a million. Migrants now favor places like Austin, Texas; Bismarck, North Dakota; Fayetteville, Arkansas; and Nashua, New Hampshire, to name a few.

A second pattern in the move toward deconcentration is the growth of nonmetropolitan areas. Migrants are moving beyond the metropolitan fringe, creating widening bands of growth in nonmetropolitan areas within commuting distance of major metropolitan centers. Or they are clustering in "miniature" cities without commuting links to metropolitan centers. Some are choosing to live in entirely rural settings. In northern New Hampshire, upper Michigan, the Ozarks, and the Sierra Nevada foothills a kind of rural renaissance is under way. In these small communities, the influx of a few people can have a substantial effect.

Migrants are attracted to nonmetropolitan areas by their amenities and by lower living costs. Both are especially salient for retirees. The ranks of this group have been multiplied by a pattern of earlier retirement that, along with larger pensions and indexed Social Security payments, has created an increasingly footloose population of potential consumers of these amenities. Although decisions about where to settle are private ones, these decisions have public consequences for the communities the migrants choose. For example, retirees may inject new dollars into a local economy, and their needs for gerontological care may stimulate the growth of local health services.

More generally, newcomers may bring with them different expectations regarding standards of service and care. Parents may expect the local school district in small-town Maine to provide as complete a curriculum as their children enjoyed in Boston, even though the district has only two schools. And when they get sick, they want an emergency room and a cardiovascular specialist.

Of course, some nonmetropolitan areas continue to record population loss. The problems here are different but all too familiar. The

young, the educated, and the skilled leave to seek better opportunities elsewhere, leaving behind workers who are overaged, undereducated, and underskilled. As a result, the area becomes less attractive to new industries, and the area's competitive position erodes further.

Will deconcentration continue? No one really knows, but, on balance, the evidence suggests that it will. The preference for smaller communities seems to be both widespread and deepseated. People everywhere are moving from large metropolitan areas to smaller ones and from the metropolitan core to its periphery.

The only argument that has been raised against further deconcentration is the rising price of gasoline, which conceivably could curb long-distance commuting. However, restricted commuting distance is not necessarily at odds with a deconcentrated pattern of settlement. Indeed, it appears that newcomers to the nonmetropolitan areas have been positioning themselves—if anything—closer to their jobs. As centers of nonagricultural employment spring up in the nonmetropolitan areas, many workers who moved out of major centers can commute to work at a nearby "miniature city."

REGIONAL SHIFTS

The preference for life in smaller communities will shape the contours of national population growth, but it will do so in the context of larger migrations among regions. Where these migrants choose to locate will affect demands for public service and governmental responsibilities for meeting those demands.

The migrations of the 1970s were frequently characterized as shifts from "snowbelt" to "sunbelt." Figure 7 is a picture of that shift, based on 1980 census data. Some of the most dramatic effects of this southwesterly tilt have been political. New York will lose five congressional seats; Illinois, Ohio, and Pennsylvania will each lose two; Indiana, Massachusetts, Michigan, Missouri, New Jersey, and South Dakota will each lose one.

However, there is considerable regional diversity in the growth of the sunbelt. Figure 8 shows the country divided into 26 economically and culturally distinct groupings of counties, irrespective of state boundaries. These groupings, which reflect distinct regional resources, economic activities, and forms of human settlement, reveal more clearly the distinctive regional growth patterns. For example:

- The push to develop new sources of energy, and to further develop traditional sources, is attracting job seekers to the southern Appalachian coal fields and to mining and oil shale enterprises in the entire Rocky Mountain area (Areas 11, 24).

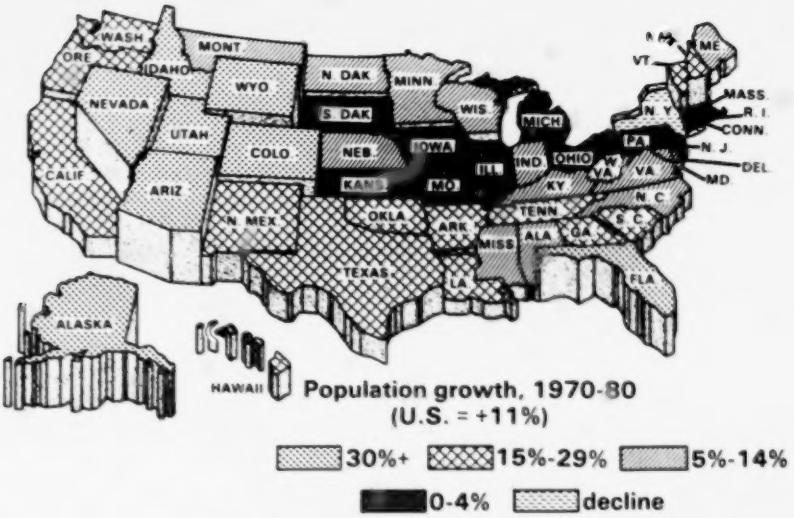
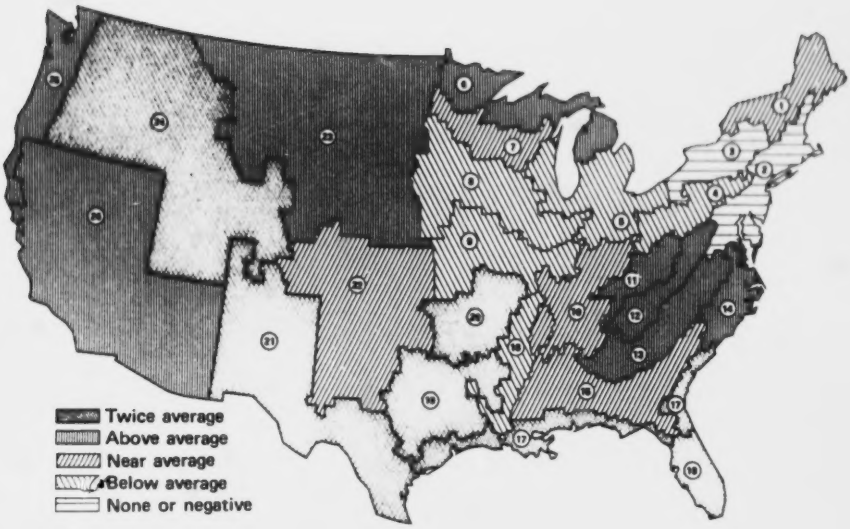


Fig. 7—The shift to the sunbelt, 1970-80

- The continuing relocation of industries seeking lower costs for land, labor, energy, and transportation attracts workers and other support business to the South and Southeast. In the past decade, the South replaced the Middle West, and Texas replaced Michigan, as the region and the state making the heaviest new capital investment in manufacturing.
- Desirable regions such as northern New England, upper Michigan, and northern California are growing rapidly as people move there seeking tourism, recreation, or a better return for their retirement dollar.
- Partly as a result of the patterns described above, the lower Great Lakes industrial belt (Area 5) has ceased growing. However, it is not clear whether jobs and people will continue to move as rapidly south and west in the next twenty years as they have in the past twenty. Certainly in the foreseeable future, the center of economic activity will remain concentrated in the nation's northeast quadrant.

The net effect of these migrations is that the transition from population growth to stability will advance unevenly. Some sections of the country are now closer than others to a state of zero growth, and are



Key:

1. Northern New England – St. Lawrence
2. Northeastern Metropolitan Belt
3. Mohawk Valley and New York – Pennsylvania Border
4. Northern Appalachian Coal Fields
5. Lower Great Lakes Industrial
6. Upper Great Lakes
7. Dairy Belt
8. Central Corn Belt
9. Southern Corn Belt
10. Southern Interior Uplands
11. Southern Appalachian Coal Fields
12. Blue Ridge, Great Smokies, and Great Valley
13. Southern Piedmont
14. Coastal Plain Tobacco and Peanut Belt
15. Old Coastal Plain Cotton Belt
16. Mississippi Delta
17. Gulf of Mexico and South Atlantic Coast
18. Florida Peninsula
19. Eastern Texas and Adjoining Coastal Plain
20. Ozark – Ouachita Uplands
21. Rio Grande
22. Southern Great Plains
23. Northern Great Plains
24. Rocky Mountains, Mormon Valleys, and Columbia Basin
25. Northern Pacific Coast (including Alaska)
26. The Southwest (including Hawaii)

Fig. 8—Rate of population change, 1970-80
(U.S. average = +11.4%)

getting there faster. For example, the trends portrayed above have made zero population growth a reality first in the Middle Atlantic states.

These irregular patterns of growth and decline are already forcing adaptations at the local level. Some communities will have to adjust their fiscal systems to property values and sales tax revenues that are no longer growing, to a surplus of schools and other idle capital stock, and to changes in the population mix. Other places will confront rapid growth that they are ill-equipped to cope with, and which their residents may vigorously oppose.

However these difficulties were handled in the past, local governments will find them different, and probably more difficult, to handle in the future. In the 1960s and 1970s, local governments experienced unprecedented growth, fueled largely by federal and state aid. Paralleling that growth, however, was a virtual explosion of federal mandates dictating various standards—for affirmative action, for energy conservation, for environmental protection, and so forth. These mandates considerably reduced the flexibility and autonomy of local governments in setting service levels and accommodating to change. The New Federalism has reduced federal intervention in local affairs and increased the autonomy of small communities. But each community will also face the challenge of managing its own growth or decline, however ill-equipped it may be to do so.

IV. IMMIGRATION

We have been sketching a demographic picture in two dimensions: a declining fertility rate and a consequent drift toward zero population growth; and internal migration patterns that modify the regional effects of zero growth. But the demographic picture has a third and more striking dimension: massive, and only partly controlled, immigration. How many immigrants there will be and where they will choose to settle will alter the already complex patterns described above.

Forecasting the volume and characteristics of international migration to the United States is more difficult than forecasting American fertility or internal migration. Foreign immigration is only one strand in a web of international relationships, all involving complex economic and diplomatic decisions. These decisions cannot be made unilaterally by the United States; they are complemented by decisions made by other countries, especially neighboring ones.

The aspects of these complexities that can now be discerned point toward increasing foreign immigration to the United States. The key cause is expected to be high wages and low unemployment in the United States as the economy continues to expand in the face of a steady, then declining stock of native-born labor. The resulting labor shortages may lead to a relaxation of immigration restrictions. Even if this does not happen, the gulf between U.S. affluence and the economic difficulties facing its southern neighbors may create such strong incentives for migration to this country that illegal entry of foreign nationals will be practically uncontrollable, whatever the formal U.S. policy stance. We now discuss these issues in more detail.

THE POLICY SETTING

America's immigration policies have evolved in response to practical concerns. From the founding years until World War I, the U.S. government imposed few restrictions on immigration. In response to this laissez-faire policy, more than 34 million documented immigrants, representing more than 60 ethnic groups, poured into the country and dispersed. What they sought were better economic opportunities and better political environments; what they provided were the skills and the cheap labor that the rapidly industrializing nation needed.

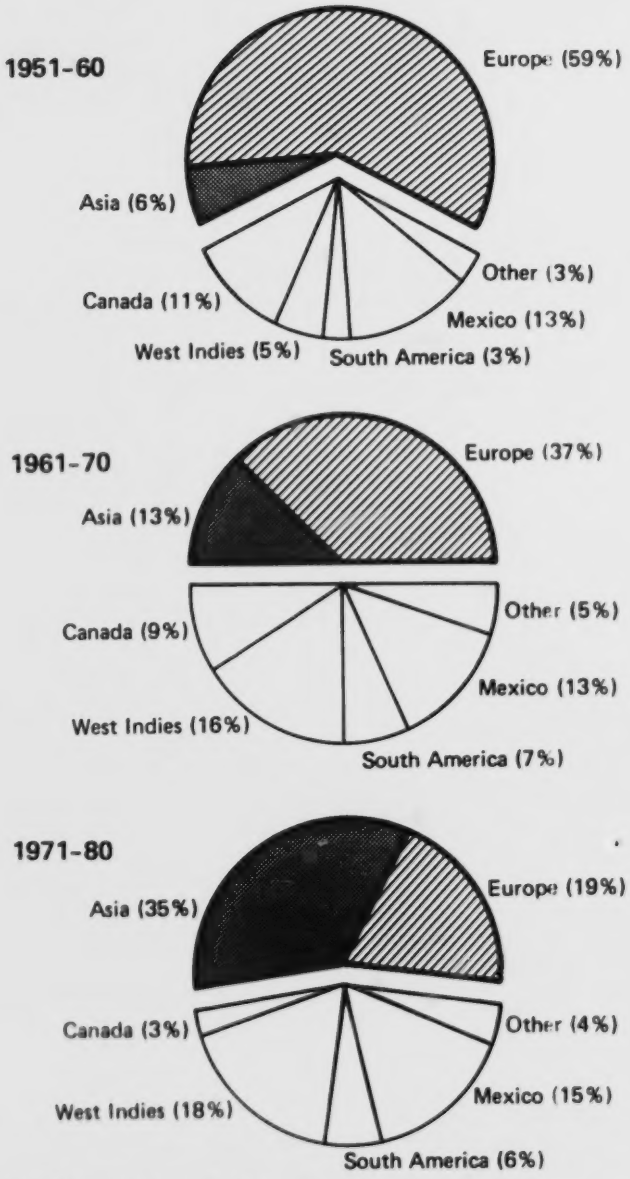
After World War I, this laissez-faire policy changed radically. America's emergence as a world power, combined with postwar isolationism, made its citizens less willing to accept a national make-up continually altered by new entrants. Quotas by national origin, strongly favoring northern and western Europeans, were imposed to protect against the addition of supposedly inferior ethnic stocks (southern and eastern Europeans) to the melting pot. These quotas, although periodically altered to accommodate refugees from Communist countries, remained the cornerstone of immigration policy until the mid-1960s.

Since 1965, there have been major changes in immigration policy. First, the national origin quotas were phased out. Second, family reunification, rather than occupational skills, was made the central criterion for entry. This meant that, whatever their national origins, spouses and minor children of immigrants who had become citizens were assured of entry, and other close relatives were given preference for entry. Third, for the first time, limits were imposed on Western Hemisphere immigrants. Initially, only 120,000 new visas were reserved for these immigrants annually; later, they were simply included in the total yearly ceiling of 270,000 immigrants. The Western Hemisphere restrictions were intended to restrict entrants from Latin America, whose population growth threatened to generate very large numbers of immigrants.

These new directions in immigration policy dramatically changed the numbers and kinds of immigrants seeking entry. The number of legal immigrants admitted annually soared from 297,000 in 1965 to over 800,000 in 1980. As Fig. 9 shows, their geographic origins also shifted sharply. The percentage of Europeans plummeted while the percentage of Asians increased more than fivefold. Contributing to the Asian influx was the admission of nearly 500,000 Indo-Chinese refugees as permanent residents between 1975 and 1980.

The mix of skills that immigrants brought to the United States also changed, although not always according to plan. Despite the fact that family reunification was given priority over job skills in admitting immigrants, the general skill level of immigrants rose. This shift occurred because substituting a universal quota of 20,000 immigrants per country for the national origin quotas, combined with the family reunification provisions, effectively excluded highly skilled Europeans without prior family ties. On the other hand, highly skilled immigrants from Asian countries found entry relatively easy. These countries had little history of immigration to the United States, and so applicants had fewer relatives to compete with.

As a result of the interaction of these immigration provisions, the skill mix by area varied widely. For example, between 1961 and 1965,



SOURCE: *Statistical Abstract of the United States,* 1980.

Fig. 9—Reported country of birth of immigrants, 1951-80
(% of total immigrants)

46 percent of European immigrants, but only 9 percent of Asian immigrants, were professionals. By the period 1969 to 1972, professionals made up less than 20 percent of all European immigrants, while the percentage of Asian entrants who were professional had shot up to 56 percent. Under present policies, the percentage of European professionals will probably remain low; however, as more Asian immigrants become citizens, one can expect that family reunification will dominate skills as the criterion for entry, and that the majority of new Asian immigrants will be less-skilled workers.

Facing a quota for the first time, the number of immigrants from North and South America generally fell. Because those who did come were admitted on a first-come-first-served basis, they were predominantly less-skilled workers.

The changes in immigration policy since 1965 have significantly altered the size, ethnic mix, and labor skills of recent immigrant cohorts. Each of these changes will, in turn, influence how easily the immigrants will be assimilated into the communities where they have settled, and whether native residents will see them as a threat to their own jobs or as valuable sources of labor.

Further complicating the assimilation and acceptance of legal immigrants is the significant increase in illegal immigration. Estimates vary enormously, but recent assessments conclude that somewhere between 3.5 and 5 million illegal residents lived in the United States in 1978, and that their ranks may be growing by about 500,000 per year. Mexicans constitute about one half of this illegal population.

What forces are moving such large numbers of people to enter the United States, either legally or illegally? Two dominate: the extreme imbalances in a world economy that is increasingly interconnected, and the political instability generated by the collapse of former spheres of influence.

Imbalances in the World Economy

Unlike its southern neighbors, the United States has a high per capita income and a low population growth. For example, the average American makes about seven times as much as the average Mexican. This income gap, caused mostly by differences in employment and wages, makes U.S. jobs very attractive to workers from Mexico, Central America, and the Caribbean. Moreover, aggressive marketing by multinational corporations eager to expand their markets to less developed countries, combined with the falling costs of transportation and communications, make residents of these countries more willing and able to emigrate. And once started, the flow of immigrants feeds

itself as family and friends follow successful immigrants to the same areas.

Population pressures in the developing world also stimulate immigration. For example, while natural increase added 1.5 million Americans per year during the 1970s, the combined rate in Mexico, Central America, and the Caribbean was 5.8 million. Indeed, Mexico alone, with less than one-third the U.S. population, adds in absolute numbers two-thirds more new residents to its population each year. Although there are signs that the fertility rates in these countries have begun to fall in the past decade, the demographic imbalance between them and the United States will not disappear until well into the next century. To illustrate, if Mexican fertility were to drop today to the replacement level—it is now more than two and one-half times replacement—the country's population would still grow by 40 percent in the next two decades, slowing down only gradually thereafter.

Hence, rapid population growth in the poor countries neighboring the United States is a certainty for the rest of this century. By contrast, the smaller cohorts of the U.S. baby bust years will tighten the domestic labor market, reduce unemployment, and accelerate the growth of real wages. We have argued that this demand for labor will attract unprecedented numbers of women into the labor market and cause retirement ages to rise. But even the increased participation of women and older workers may be insufficient to meet the demand. And if U.S. jobs were attractive to foreigners in the past, the labor squeeze in the coming decades will make them even more attractive.

Immigration is not the only way by which this imbalance between U.S. and foreign markets will be corrected. An alternative is to export capital and production technology to less developed countries, as several European countries are doing. For example, Germany came to realize that importing Mediterranean workers to supplement the German labor force during boom times caused social and economic problems when the German economy cooled off; moreover, it has proved extremely difficult in practical terms to repatriate the foreign workers and their families. It is unlikely, therefore, that Germany and other northern European countries will turn again to unrestricted temporary importation of labor. Instead, in the face of long-term domestic labor shortages, they are focusing attention on exporting capital, technology, and management skills for production abroad.

Although this alternative to immigration is simple conceptually, its implementation will require solving new problems. These include (1) determining how to balance control of the production enterprise between the host developing countries and the exporting developers in the face of restrictions that most hosts impose on total foreign ownership and control; and (2) establishing procedures to support more com-

plex international arrangements since developed countries often invest in less developed countries other than the ones providing the immigrant labor. In the case of the United States, for example, much of the investment for foreign production has centered in the Far East, while the source of low-skilled immigrants has been the Caribbean basin. Thus, although there are several ways in which the labor markets of the United States and of its developing neighbors might move toward equilibrium, immigration will surely play a major role.

The Collapse of Former Spheres of Influence and Increasing Political Instability

The decades since World War II have seen substantial increases in political instability, chiefly associated with the collapse of the great European empires and with internal revolutions to establish a more equitable economic order. One product of this instability has been the immigration of former client populations. Vietnamese refugees must be understood in this context, as should three-quarters of a million Cuban refugees in the early 1960s.

The phenomenon is not, of course, solely an American one. Britain is deeply troubled with the absorption of the Indians from Africa and the Caribbean. France has received the Pied Noirs from Algeria, many other North Africans, its share of Vietnamese, and large numbers of blacks from French-speaking sub-Saharan Africa. Holland has its Indonesians, Portugal its Angolans.

Although we cannot predict the timing or the magnitude of future waves of immigrants from client countries, the continuing political and military presence of the United States in so many foreign lands makes it unlikely that the Vietnamese will be the last. Future candidate source countries include South Korea, Thailand, the Philippines, Taiwan, and Israel.

Generally increasing political instability worldwide may also generate immigrants seeking asylum in the United States. Iran, Poland, El Salvador, and Guatemala are examples of countries whose citizens may flee internal turmoil.

DOMESTIC RESPONSES TO IMMIGRATION

Bombarded by television news footage of the Mariel boat lift of Cuban refugees and the dramatic plight of Indochina's boat people, the American public has become keenly aware of immigration. In an economic environment in which citizens fear that an influx of immi-

grants may cost them their jobs, this awareness has been translated into efforts by the past three presidential administrations to establish a new immigration policy. Yet in each case no action could be agreed upon. Too many conflicting interests and goals were activated to make a consensus possible. However, there are more fundamental reasons why reaching a consensus is so difficult:

- Immigration can no longer be treated as an independent policy area, because immigration policies have widespread and often unintended implications.
- Immigration is intimately linked to other foreign and domestic policies, and the enforceability of our immigration laws has become highly sensitive to external forces.

Most analysts agree that immigrants will have little effect on the overall national economy, but that they could have distributional effects by making some groups or regions better or worse off. Immigrants could affect the communities in which they settle in a variety of ways:

- Demands for special support services
- Need to teach English as a foreign language in schools
- Housing
- Welfare
- Competition with native labor
- Cultural effects

The extent of these effects is hard to establish. For example, immigrants may place added stresses on housing and labor markets and require special social services. However, most immigrants (even most illegal residents) pay federal income and Social Security taxes, and few illegals are likely to apply for welfare or Social Security benefits. To some extent, immigrants compete with native labor, but the less-skilled entrants from Asia and the Caribbean Basin are certainly not competing for high-paying jobs. And in some cases their cheap labor may be all that is keeping some industries from going out of business or moving overseas.

The most important effects of immigration may be cultural. Each community's cultural and economic makeup helps determine the ease with which the immigrants settle in. The same demographic and labor market conditions that induce foreigners to migrate here may also reduce the opposition to accepting them. Even the traditional opposition of labor unions may abate. Native workers will themselves be reaping the wage and employment benefits of the tight labor market, and their membership will contain significant numbers of foreign-born and second-generation Americans. Of course, as in the other eras

when America absorbed a massive influx of foreign workers, some social and ethnic distress is inevitable. The shift in the composition of immigrants may keep the assimilation issue alive.

Even more basic than cultural assimilation is the problem of balancing the rights of citizens and noncitizens. The new categories of immigrant—permanent resident, entrant, and parolee—raise the issue of whether persons in these categories have virtually the same rights as citizens. If they do not, they threaten to become a disenfranchised class. If they do, then citizenship would seem to be devalued and its contribution to the image of a sovereign nation threatened.

No government action is likely to alter the main patterns of fertility and internal migration that we have described. However, if it were possible to assess the distributional effects of immigration, the government might want to offset some of them by direct policy intervention. Even in the absence of information about distributional effects, public agitation about the *perceived* effects of immigration is likely to stimulate government proposals to regulate further the number and kinds of entrants. Recent proposals include quotas on refugees, employer sanctions and identification cards for all workers in order to curtail the employment of illegal residents, various amnesty arrangements for those already illegally in the country, and stronger control of U.S. borders. Each of these suggestions has encountered spirited opposition from some group. But if we have correctly predicted a shortage of labor at the end of this decade, public concern about losing jobs to immigrants may greatly diminish.

Nevertheless, despite current public support for a tougher stance on illegal immigration and more restrictions on refugees, the realities of the interconnected world severely hamper the ability of the government to make policy choices based only on domestic concerns. In many ways, the flow of people into the United States should be viewed as just one of a number of global exchanges that include money, technology, and goods. These flows knit the nations of the world together in such a way that it is no longer realistic to formulate a free-standing immigration policy. U.S. decisions about immigration may have important and perhaps unanticipated economic, political, and social consequences, both here and in the nations from which the immigrants come. For example, although immigrants are not likely to affect the U.S. economy on a national level, substantial emigration may significantly affect some Third World economies. U.S. policies that favor skilled workers may drain these countries of human capital needed for development. Policies that substantially reduce legal or illegal immigration from some countries, and therefore staunch the flow of money these immigrants send home, may eliminate a way of promoting economic development that is more efficient than foreign

aid. Political decisions concerning immigration may have serious domestic repercussions: the half-million Cubans accepted as political refugees now constitute a powerful magnet for more immigrants, both legal and illegal, and a powerful domestic lobby to which immigration policy must be responsive.

The complex web of considerations that surrounds the issue of Mexican immigration provides an excellent example of how national interdependence constrains U.S. immigration policy choices. U.S. desires to curtail illegal immigration from Mexico cannot be considered apart from a wide range of other national policy goals: obtaining a secure supply of oil, ensuring a stable political environment in a neighboring country, encouraging Mexico's industrial growth. And these national goals must be pursued in harmony with—or perhaps in conflict with—domestic lobbies for and against cheap Mexican labor.

Of the three demographic trends that we have discussed, only immigration is subject to direct manipulation by government policy. However, we have argued that immigrants are only one of a number of global exchanges that knit nations together. For this reason, immigration policies cannot be formulated without specific reference to the nation's larger political and economic goals. Thus, the government's ability to unilaterally alter the immigration trend is severely constrained by the national interest.

V. IMPLICATIONS

In speculating about America's demographic future, we have sketched a multidimensional structure. The basic component of the structure is the fertility rate, which determines the growth rate of the native population. We have predicted that it will remain at its current low level or decline further, and that higher wages and lower unemployment will ensue as employers compete for shrinking cohorts of younger workers. As this competition intensifies and labor markets tighten, young women and mature workers nearing retirement will be drawn into, or retained at, work. These tight U.S. labor markets, in conjunction with the pressures of population growth and political instability abroad, will increase the flow of legal or illegal immigrants. The effects of these events will be sweeping, but they will be distributed unevenly across the country as the population shifts out of larger cities and to the South and West, and as the immigrants settle disproportionately in particular areas.

America's policy choices will have to accommodate all these developments if they are to shape the future instead of merely reacting. To convey the magnitude of the resource shifts implied and to define some of the necessary tradeoffs, we examine four areas in which massive changes are already under way: education, health care, military preparedness, and Social Security.

EDUCATION

The baby bust that began in the late 1950s was felt first in hospital maternity wards, then in elementary schools. Since the fertility decline was nationwide, unemployed teachers were frequently forced to find other jobs. Teachers as a group were slow to adjust to the decreasing demand for their services. Some districts responded to the surplus of teachers by reducing the pupil-teacher ratio in the classroom; elsewhere, financial, political, or contractual constraints made such adjustment impossible.

As the products of the baby boom matured, secondary schools expanded to meet their needs, and Ph.D. programs geared up to produce the necessary faculty for colleges and universities. But as the successively smaller cohorts born in the 1960s and 1970s matured in their turn, secondary schools felt the pinch that elementary schools had experienced earlier. Smaller student bodies translated automatically

into smaller budgets, because appropriations for many state and local schools are tied to enrollments.

Colleges and universities are now struggling with the same problem. As in the case of primary and secondary teachers, the numbers of new Ph.D.s continued to grow long after it should have been evident that the number of college students to be taught would soon fall. U.S. universities awarded 6,000 doctorates in 1950; in 1960 they awarded 10,000. In 1970, when the number of births had been falling for more than a decade, they awarded nearly 30,000 doctoral degrees. Ph.D. production peaked in 1974 at about 34,000, then declined sporadically and slightly to 32,000 by the end of the decade. The effects of this very slow adjustment to the realities of the labor market are graphically illustrated by the composition of the Ph.D. labor force in the humanities. Of the 60,000 Ph.D.s working in this area in 1977, 25 percent received their degrees in the 1960s, and 44 percent received them in the 1970s.

Because U.S. fertility has continued its general decline in the 1970s, the number of native-born children entering the educational system will continue to be low through this century. This number might rise somewhat in the late 1980s as the children of the baby-boom mothers enter school. These women, who were born around 1960, are members of the largest cohort in the nation's history. Even with declining birthrates, they may still produce more babies than the cohorts immediately older and younger than they. Even so, with the low and possibly declining birthrates that we expect, any such increase will probably be small and temporary. Educators cannot count on it to rescue school systems from the long-term decline in enrollments that appears to be in store. Instead, government programs and counseling facilities on every academic level should move to encourage a decreased supply of teachers to meet a decreased demand.

Faced with continued low fertility, the American educational system can minimize the effects of the decline in four possible ways. However, the system does not exercise equal control over all four.

First, high schools and colleges can blunt their coming enrollment declines by persuading a higher proportion of young people to stay in school. (This option is not, of course, available to elementary and junior high schools, where enrollment is mandatory.) Secondary and college educators may well follow this tack, and government programs may be designed to support their efforts, but they will face stiff competition from the increasingly tight labor market. If it has been hard in the past ten years to keep youngsters in school in spite of high youth unemployment rates, it will be even harder in the future, when high wages and good job opportunities will beckon even more enticingly.

A second possibility is adult education. In the next decade, the

baby-boom cohorts, the largest group of citizens in the nation's history, will pass through the age bracket 35-45. It is at this stage in life that many housewives enter or reenter the labor force, and many other workers seek to reroute their energies. Perhaps even more important, some workers may be motivated to change careers by the "promotion squeeze" that will be precipitated in the labor market as their large cohort attempts to move into too few senior positions. These demographic facts mean that there will be increasing numbers of candidates for mid-life career redirection in the years ahead. If school districts could design courses that meet the needs of these workers, facilities and personnel in secondary and higher education would adjust to the baby bust with less difficulty. Ironically, a promising target population is some of the displaced educators themselves, who may seek new skills to qualify for positions outside education.

Less manipulable but equally important in altering the demand for education is regional migration, which can markedly change the age composition of an area's population. The effects can be both immediate and long term. If large numbers of young adults move to an area, their children immediately swell the enrollments of the local schools; in addition, the adults increase the proportion of the community's citizens who are of childbearing age.

The growth of San Jose, California, between 1950 and 1970 illustrates how in-migration can alter the local age structure. San Jose's population tripled during this period, mostly because of migration. As a result the population distribution developed a pronounced mid-range bulge: 37 percent of its residents were 20 to 44 years of age.

Finally, there is the potential of increasing immigration. In Sec. IV we discussed the economic forces that will encourage immigration. The increasing flows that we anticipate will carry consequences for education. Most immigrants will be young or middle-aged adults, who can be expected to bear children at well above the rates of native Americans. Thus their children should partially supplement the youngest—and thinnest—parts of our national age distribution. To the extent that this occurs, the school-age population will decline less rapidly. However, it will come to consist increasingly of children born to Latin and Asian parents. The linguistic and cultural needs of these children will pose major challenges to school curricula, teacher training, school administration, and the implementation of equal opportunity legislation. The Los Angeles school system has already had to face these challenges during the 1970s.

HEALTH CARE

Around the year 2010, the throngs of Americans born during the baby boom will begin turning 65. During the second decade of the twenty-first century, they will swell the ranks of the elderly by 29 percent. A growing portion of them will be widows, many of them probably living alone in central cities. They will need not only hospitalization, outpatient care, and nursing homes, but also facilities for rehabilitation and supportive services such as homemaker assistance and home nursing. Society has 30 years to prepare for this burst of demand for health care.

In an abstract sense, the resources that society will not be spending on educating children should be available for handling the rising burden of older dependents. But the tradeoff is not that straightforward. It is not politically easy to close down an occasional school in order to open an occasional nursing home. More fundamentally, the shift from a child-oriented society to one oriented toward older persons may entail a massive shift of responsibility for "dependency" from the family to the public sector. Although American families typically insist on retaining control over the socialization of their children, many of them are willing to relinquish their elderly parents to institutional care. Given such inclinations, the coming shift from child-dependence to elderly-dependence will sharply increase the demand for public expenditures on health and retirement care.

Those expenditures are likely to be substantial. Spurred on by broadening health insurance coverage, health care expenditures have risen sharply in recent years. Personal health care spending rose more than 6 percent annually between 1966 and 1977; per capita expenditures mushroomed from $340 to $646 in 1977 dollars. In 1981, maintaining one elderly person in a nursing home cost $16,000. Only 5 percent of the elderly are now in nursing homes; by the end of the century, there may be half again as many more elderly citizens in these institutions.

The demographic changes described above will fuel the rising costs of health care, both because the sheer numbers of elderly persons will increase and because there will be a disproportionate shift within this age range toward the very old ages, in which chronic and disabling conditions are most prevalent. The potential magnitude of this latter effect is suggested in the following hypothetical comparison. If the current U.S. population were distributed by age as it is projected to be in 2035, the number of days it would spend in the hospital would be at least 25 percent higher than today. At 1979 prices, that implies an additional annual expenditure on hospital care alone of about $20 billion.

Because the future population will have not only a higher proportion of older people but also a larger share of people over 75, future requirements for personnel and facilities will need to concentrate more on rehabilitation than on cure. The preponderance of chronic and disabling conditions among the elderly will pose difficult choices between traditional medical and surgical treatments and social and psychological responses to the conditions of old age. Requirements will increase for a variety of supportive services—homemaker assistance, visiting nurses, nursing homes—to help those living alone in declining health and on low incomes.

The demands for these services will obviously be greatest where the elderly are most concentrated. The migration trends that affect this concentration are quite complex. In some cases, the elderly have been left behind; in other cases, they have themselves migrated.

The elderly who have been left behind are poor. During the 1960s, they were left in rural areas as the young, continuing a long historic trend, sought better jobs in the cities. In the 1970s, this trend began to reverse itself. Workers were still interested in good wages, but millions of them were willing to trade off between wages and "quality of life." As noted in Sec. III, these tradeoffs are leading them to smaller cities and rural areas. In some rural areas, younger adults are suddenly outnumbering the elderly, who had earlier been left behind. But in the central cities, the opposite pattern obtains: the out-migrating young are leaving the central city increasingly to the elderly. As a result, these cities will have a higher per capita demand for health services, but fewer workers to support the services.

The elderly who have themselves migrated are the more affluent. They are moving to places where it is both pleasant and cheap to live. Sometimes "pleasant" means "warm"—more retirees have headed for the sunbelt than for any other part of the nation. But pleasant has also meant quiet areas, notably in northern New England and in northern Michigan and Wisconsin, where these former workers perhaps used to have their summer vacations.

Collier County on the Gulf of Mexico in southern Florida offers a good example of what the migration of retired Americans has done to population in the sunbelt. In 1960, Collier County had 15,000 inhabitants. By 1970, the number had more than doubled, and it had done so again by 1980 when the census counted 86,000 inhabitants. A disproportionate share of this growth derived from elderly newcomers.

Population changes in Huron County, Michigan, reflect the migrations of both the elderly and the young. Located on Saginaw Bay in the northeastern part of the state, the county has not grown much in the last twenty years. Its 1980 population of 36,000 is only a shade above its 34,000 inhabitants in 1960. But the components of that

population have shifted. In the 1960s, total population fell about 1 percent a year, but the elderly population grew at about the same rate. The young were moving out while the elderly moved in. In the 1970s, the elderly moved in more quickly—about 2 percent a year—but the total population was also growing at about 3 percent a year as the young began to find rural areas attractive alternatives to congested cities.

In the majority of cases, the areas to which these more affluent retirees have moved will benefit from their presence. They inject retirement dollars into the economy. They generate employment but do not compete for jobs with local workers. Rather than taxing local health services, they seem to stimulate such services to cover their needs.

An important unknown in planning future health care services is the rapidly expanding, but undocumented, population of illegal immigrants. Although studies show that most such immigrants pay more in federal taxes than they consume in government services, the fact that they are undocumented means that Medicaid does not pay for their health care. Thus the local sources of health care—public hospitals and health clinics—must meet their needs. In places such as Los Angeles County and New York City, where undocumented persons are heavily concentrated, this burden may be very heavy indeed. And the contribution to the individual's health is necessarily less than it could be, because the care lacks continuity.

The very large numbers of illegal immigrants now in, and continuing to enter, the country have other implications for the health care system. For example, we cannot estimate what kinds of health care needs their American-born offspring will have. Some of these children will receive emergency or preventive care through the school system. Whatever their number, they represent a potential source of new demand that will certainly be noticed whenever they choose to register for the benefits to which they are entitled as American citizens.

MILITARY PREPAREDNESS

The armed forces have found it increasingly difficult to attract and retain recruits, even during a period of sharp increases in enlistment-age population. Whatever the specific causes of these recent problems, they may well be dominated in the future by more fundamental and lasting developments. In 1980, the services had a pool of 2.1 million from which to draw. By 1990, that pool will have shrunk by 20 percent to 1.7 million. And the members of the pool will experience lower

unemployment rates and higher real wage growth in the private sector than did the preceding cohorts. The financial enticements of the civilian world will surely increase the costs of a volunteer force or aggravate the dissatisfactions of a conscripted one.

The armed forces might adjust to these circumstances in several ways. First, more activities could be shifted to private vendors, thereby reducing the requirements for inducted personnel. A second strategy is, where possible, to substitute physical capital for labor. This occurs naturally in the private sector, as it adjusts to demographic changes. The services might meet the challenge in the same way.

A third approach is to provide incentives for enlistment and reenlistment by strengthening the armed forces' educational program—for example, by increasing the amount of education that can be obtained directly under military auspices. Expanded opportunities to get college-level training might persuade volunteers to extend their service obligations. Enhancing educational opportunities would have the additional benefit of helping to maintain enlistment standards in the face of scarcer "high quality" volunteers and more sophisticated weapons and operational procedures.

A fourth, more problematic approach would be to accept into the armed forces increasing proportions of immigrants. Initially attracted to the United States by the tight civilian labor market that we have predicted, immigrants without needed skills may find military wages and benefits more attractive than the lower paying civilian jobs for which they are qualified. Immigrants who now work as migratory farm laborers and domestics might, in ten years time, concentrate in the military.

In the past, noncitizens have served in the military when manpower needs required it. And throughout American history citizenship has been exchanged for honorable military service. For example, during World War I, 18 percent of the draftees were immigrants. (Immigrants from "enemy" nations were excluded.) In that war, 124,000 soldiers achieved citizenship through military service. Concern about the loyalty of noncitizen recruits has always been voiced, but it has never moved either Congress or the Department of Defense to impose restrictions on the recruitment of aliens.

Although the desire to maintain an all-volunteer force and the increased flow of immigrants seem to be complementary phenomena, the Armed Forces Qualifying Test may present an insurmountable barrier to enlisting large numbers of immigrants. This battery of mathematical and verbal tests is designed to ensure the personnel standards considered necessary to use and maintain a modern army's sophisticated equipment. It is unlikely that large numbers of non-English-speaking immigrants would score above the test cutoff. In

addition, the possibility of enlisting large numbers of immigrants has stimulated Congress to ask questions like "What would happen if 25 percent of the armed services are Hispanic and we have to fight a war in Latin America?" But Congress is probably more sensitive to the implications of lowering the entry standards. More than any other factor, this sensitivity makes it unlikely that policymakers will see immigrants, however recruited, as the salvation of the all-volunteer force.

Finally, it may be necessary to return to conscription. The volunteer army may have been affordable only when the number of young adults was large and growing.

SOCIAL SECURITY

Over the past decade, the financial soundness of the Social Security system has eroded, and as of 1982 its condition has become precarious. Since it is financed on a pay-as-you-go basis, Social Security is more like a pipeline than a fund. It relies on younger generations to support older ones, making the balance between these groups critical. For this reason, the system is highly susceptible to demographic shifts that no legislation can fully anticipate.

The central dilemma for the Social Security system over the long term can be simply stated. A falling fertility rate has combined with earlier wide swings in fertility and with rising life expectancy to create a population with more older persons to be supported but fewer Americans of working age to provide that support.

Life expectancy for Americans has risen gradually over the past three decades. Today, the average 65-year-old male can look forward to 14 years of retirement; his female counterpart can expect more than 18. Medical research that focuses on the process of aging could dramatically extend life expectancy, and hence the number of years in which workers would collect retirement benefits.

Despite the potential for longer productive lives in the workforce, for the past 25 years American males have been choosing to retire earlier than they had before. For example, in 1950, fully three-fifths of men in their late 60s were still at work; today only one-fourth of these workers draw paychecks. Whether this trend will continue is hard to predict. Generous pensions, larger disability payments, and increased Social Security benefits have undoubtedly stimulated these early retirements. Conversely, changes in tax and Social Security laws could reverse the trend. We have also suggested that the increasingly attractive labor market of the next twenty years might entice

many workers eligible for retirement to stay on the job. Medical research on the causes of aging promises to increase both average life span and vigor during that increased span. If this promise is fulfilled, older workers may choose to remain on the job longer because they are healthier and more energetic. Their failure to vacate senior positions could prompt friction with members of the baby-boom cohorts, who will be looking to move up. Hence, a combination of demographic trends and improving health in old age may require a radical revision of both hiring and retirement policies.

Another uncertainty in taking the pulse of the Social Security system is the number of women in the labor force. Half of today's wives hold paying jobs, and the tightening of future labor markets will continue to make employment very attractive to them. In addition, increasing proportions of each generation of women since those born in the 1920s have entered and remained in the labor force. Thus each generation of women is being replaced by one with increasingly strong ties to lifelong careers.

If, as we predict, the percentage of working women remains high or increases, their wages will provide some financial relief to the stressed Social Security system. However, they will also be the source of long-term strains when they retire and begin to collect full, rather than dependent, benefits.

Against the backdrop of these changes is the central demographic fact of the fluctuating fertility rates and hence fluctuations in the numbers of future wage earners. The model described in Sec. I predicts that the current low fertility rates will remain low and will probably decline further. The demographic consequence of this trend is a population with a sharply rising ratio of retirees to wage earners.

Perhaps the greatest uncertainty involves future immigration. By many estimates, more than a million immigrants—legal and illegal—are now pouring into the United States each year. Political or economic disruptions in other countries might increase this flow. There are many unanswered questions about these newcomers:

- How much will these immigrants earn?
- What will their birthrate be?
- How long will they live?
- When will they retire?
- Will they spend their retirement years and their retirement income in the United States?

The emerging answers to these questions will have important implications for the Social Security system.

DISCUSSION OF SOURCES

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